REMARKS

Status of Claims:

Claims 1-28 are present for examination.

Claim Objections:

Claims 1, 6, 11, 16, 23 and 28 stand objected to for the reasons stated in paragraph 3 of the outstanding office action. Applicant has amended the objected to language in such a manner as to make the claim clearer and at the same time more readily distinguishable over the prior art.

Prior Art Rejections:

Claims 1, 11 and 23 strand rejected under 35 U.S.C. 102 as anticipated by Hayashi. Further, claims 6, 16, 22 and 28 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Kitamura; claims 2, 12, and 24 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Kundu; claims 7 and 17 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Kitamura and Kundu; claims 4, 14 and 26 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Cliquet; claims 9 and 19 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Kitamura and Cliquet, claim 21 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Kitamura; claims 3, 13 and 25 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Kishimoto; claims 8 and 18 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Kitamura and Kishimoto; claims 5, 15 and 27 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Cliquet and Woodson; and claims 10 and 20 stand rejected under 35 U.S.C. 103 as unpatentable over Hayashi in view of Kitamura. Cliquet and Woodson.

The examiner's rejection is respectfully traversed.

It should first be noted that in the "Response To Arguments," the Examiner has apparently concluded that the original claim limitation reciting "applying a filter operation to

the target pixel and the neighboring pixels in the local area" and the previously amended language which recited "applying a filter operation to the target pixel . . . said filtering operation such that said target pixel has one of pixel values included in said local area according to the filtering operation" are essentially of the same scope. Indeed, the Examiner states that these two statements are "identical." In order to more particularly recite applicant's invention, applicant has amended the independent claims with regard to the above language such that these claims read as follows:

> said filtering operation such that said target pixel has a filtered pixel value equal to or most closely equal to a mean value of the pixel values within the local area.

As such, the revised claim language in the instant amendment is deemed not only to overcome the previously stated objection set forth in paragraph three of the outstanding office action, but also to emphasize clearly the intended scope of the invention addressing the concerns of the Examiner in the "Response To Arguments."

With regard to the art rejections, the Examiner apparently appreciates that Hayashi does not disclose a median filter. In as much as all of applicant's claims, now recite a specific type of median filter, it is submitted that the Section 102 rejection as to Claims 1, 11 and 23 must be withdrawn. In order for a reference to anticipate a claim, the reference must disclose each and every claim limitation. This is certainly not the case here and thus the Section 102 rejection must be withdrawn.

With regard to the Section 103 rejections, the Examiner has applied various secondary references. Kundu is recited for disclosing a median filter. However, as disclosed in column 8, lines 1-9, Kundu discloses the utilization of a middle-most value if the pixel is identified as an edge pixel but discloses the utilization of a statistical D-filtering procedure if the pixel is identified as a non-edge pixel. In contrast, applicant utilizes the same filtering operation for the entire input image as recited, for example, in applicant's Claim 1, paragraph (c) and similar limitations in the remaining independent claims.

The deficiencies of the combined teaching of Hayashi and Kundu are not overcome by the remaining references, such as, Katamura (cited for different phases), Cliquet (cited for removing jaggies from an image after it has been electronically enlarged), and Woodson (cited as disclosing an alpha blending value which is alleged to be analogous to the mixing ratio). Furthermore, Kishimoto was cited for disclosing a filter using a "nearest neighbor" method in which an average value of density values in a local area is calculated and one of the pixels having a nearest value to the average value of the local area is extracted as allegedly taught in column 1, lines 59-64. However, this "nearest neighbor" method has already been discussed in applicant's specification on page 2, line 20 through page 3, line 13. As discussed therein, the nearest neighbor method preserves the steep edges of the regions and/or objects in the input image where the "steep edges" are the edges having abrupt density change. However, this method has a disadvantage that the image quality degrades due to jaggies formed at the boundaries of contours in the regions and or objects. It should be emphasized, that applicant's recited method is not a "nearest neighbor" method as apparently implied by utilization of Kishimoto in formulating the rejection. Rather, applicant utilizes a filtered pixel value which is equal to or most closely equal to a mean value of the pixel values within the local area. The local area is defined as an area including a target pixel and neighboring pixels surrounding the target pixels.

Applicant has further re-written dependent claims 2, 7, 12, 17 and 24 into independent form. These claims recite that in applying the filtering operation, the pixel having a median value of density values of all the pixels in the local area is extracted, and the median value thus extracted is used for forming the filtered image. These claims are likewise deemed to be patentable for essentially the same reasons discussed above with regard to the independent claim 1.

In view of the amendments made hereto and the arguments set forth above, it is submitted that the Patent and Trademark Office has not made out a prima facie case of obviousness under the provisions of 35 U.S.C. § 103. The particular distinguishing features about the applicant's invention have been discussed above in connection with all of applicant's independent claims. Applicant's dependent claims are deemed to be patentable at

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date March 16, 2005

By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5407
Facsimile: (202) 672-5399

David A. Blumenthal
Attorney for Applicant
Registration No. 26,257